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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of )  
VICTOR BROST et al. )  
Serial No.: 09/837,072 )  
Filed: April 18, 2001 )

) HEADER-LESS VEHICLE RADIATOR  
)  
) Group Art Unit: 3743  
)  
) Examiner: Tho V. Duong  
)

**TRANSMITTAL OF APPELLANTS' BRIEF ON APPEAL (AMENDED)**

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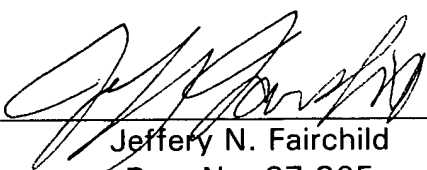
Sir:

This Amended Brief on Appeal (including an Appendix of Claims) is being submitted in response to the Notification of Non-Compliance with the Requirements of 37 C.F.R. 41.37(c) dated April 5, 2005.

Respectfully submitted,

WOOD, PHILLIPS, KATZ,  
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By

  
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April 13, 2005

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37 CFR 1.8  
CERTIFICATE OF MAILING

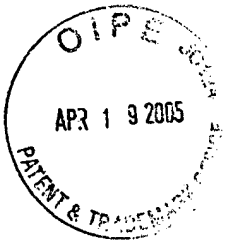
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Signature: \_\_\_\_\_



Name: \_\_\_\_\_

Karen Sanderson



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
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Sir:

REAL PARTY IN INTEREST

The real party in interest is Modine Manufacturing Company, the owner by virtue of an assignment recorded at reel 012222, frame 0527, of the entire right, title, and interest in and to the above application.

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37 CFR 1.8  
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Signature: \_\_\_\_\_

*Karen Sanderson*

Name: \_\_\_\_\_

Karen Sanderson

### RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal. A Notice of Appeal was previously filed on December 27, 2002 in response to a Final rejection dated October 1, 2002. The Final rejection was withdrawn by the Examiner in response to the Appeal.

### STATUS OF CLAIMS

Claims 1-13 are pending. Claims 3-10 have been withdrawn from further considerations as being drawn to a non-elected species, applicants having elected the species of Fig. 4c. Applicants note that claims 1 and 11 are generic. Claims 12 and 13 have been allowed and are no longer at issue. Claims 1-2 and 11 stand rejected under 35 U.S.C. 102(e) as being anticipated by Jamison et al. 6,311,768. Applicants hereby appeal the August 11, 2004 final rejections of claims 1,2 and 11.

### STATUS OF AMENDMENTS

There have been two amendments filed subsequent to final rejection. The first amendment after final, filed on September 20, 2004, was not entered as it allegedly raised a new issue and that it required further consideration beyond the rejection set forth in the final rejection. The second amendment after final, filed on November 10, 2004, was entered as the amendment re-wrote objected claim 12 into independent form, thereby placing claim 12, and its dependent, claim 13, in condition for allowance and removing them from contention for this appeal.

### SUMMARY OF INVENTION

Appellant's invention is directed to a header-less radiator, such as that shown at 10 in Fig. 1, and a method for fabricating such a radiator. The radiator 10, as shown in Fig. 1, has a radiator core 12 defining a front face 14 and a rear face 16 thereof and including a plurality of generally rectangular shaped tubes 24 interleaved with layers of fins 26 for passage of air through the core 12. The radiator 10 also includes at least one collecting tank, such as shown at 18 in Fig. 1, that is attached to the core 12 in a fluid tight manner to provide communication between the generally rectangular shaped tubes 24 and the collecting tank 18. (Specification p. 9, lines 11-16). Each of the generally rectangular shaped tubes 24 has a pair of side walls 28 extending through the core 12 and joined by a pair of end walls 30 at the front and rear faces 14 and 16 of the core 12. (Specification p. 9, lines 17-20).

The invention allows for a header-less construction by terminating each generally rectangular shaped tube 24 at one end thereof in a formed segment 32 wherein the end walls 30 are bifurcated for a distance from the one end of the tube 24, with at least one of the side walls 28 being directed away from the other side wall 28 of the tube 24 to be adapted to contact a side wall 28 of an adjacent tube 24 in the core 12. (Specification p. 9, lines 20 - p. 10, line 6). The directed side wall 28 is joined in a fluid tight manner to the contacted side wall 28 of the adjacent generally rectangular shaped tube 24. (Specification p. 10, lines 7-11). The collecting tank 18 has walls that extend over the front and rear faces 14 and 16 of the core 12 past the bifurcation of the end walls 30 and joined in a fluid tight manner to the end wall 30 of the generally rectangular shaped tubes 24 along and

beyond the bifurcation to thereby form a fluid tight joint between the walls of the collecting tank 18 and the end walls 30 of the tubes 24. (Specification p. 9, lines 12-19).

In one form, both of the side walls 28 of the generally rectangular shaped tube 24 are directed away from each other to be adapted to contact an adjacent tube 24, as shown for example in Fig. 4c. (Specification p. 9, lines 24-26).

#### GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-2 and 11 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,311,768 to Jamison et al. (hereinafter "Jamison et al.").

#### ARGUMENT

##### Issue 1.

A. The rejection of claims 1, 2 and 11 as anticipated by Jamison et al. is improper because Jamison et al. fails to disclose the limitation that the collecting tank has walls joined in a fluid tight manner to the end walls of the tubes **to form a fluid tight joint between said walls of said collecting tank and said end walls of said tubes**. See *M.P.E.P.* § 2131 and the cases cited therein (stating that "to anticipate a claim, the reference must teach every element of the claim."). Indeed, Jamison et al. fails to teach such structure.

More specifically, the Office Action dated July 29, 2003 and the Final Rejection dated August 11, 2004 both assert that Jamison et al. discloses end walls as being shown by reference numerals 50 and 52. However, referring to Figures 3 and 4, **flanges** (50,52)

cannot be said to be end walls as described in the present application at page 9, lines 17-26 as well as throughout the remainder of the specification. As seen in the present figures and described throughout the present application, the end walls (30) are just that, walls. As shown in the present figures, the end walls (30) and the side walls (28) are portions of the tube (24) that provide structure for the fluid flow path and the generally rectangular shape of the tube (24).

The Examiner's assertion that the flanges (50,52) are end walls is misplaced. It appears that Jamison et al. discloses end walls, but that structure is unnumbered in the figures. Referring to Figure 4 of Jamison et al., as edited below to depict the unnumbered end walls, it is readily apparent that the flanges (50,52) are not end walls, but are in fact flanges which extend perpendicularly from the end walls (unnumbered) of the plate pairs (20). The flanges (50,52) are completely different structure from the end walls as they are located in a completely different position, have a completely different orientation and give the plate pairs a completely different shape than the unnumbered end walls as shown in Jamison et al. and the end walls as described in the present application. Further, the flanges (50,52) perform a completely different function from the end walls. Specifically, the flanges (50,52) are used to provide a broad flat surface for sealing the plate pairs (20) together and more importantly, provide the slot (84) for retaining the collection tank (68) against the plate pairs (20) as opposed to defining the flow path for the fluid and also providing the generally rectangular shape of the tube as is done by the unnumbered end walls in Jamison et al. and the end walls in the present application. The flanges (50,52) perform neither of these two functions.

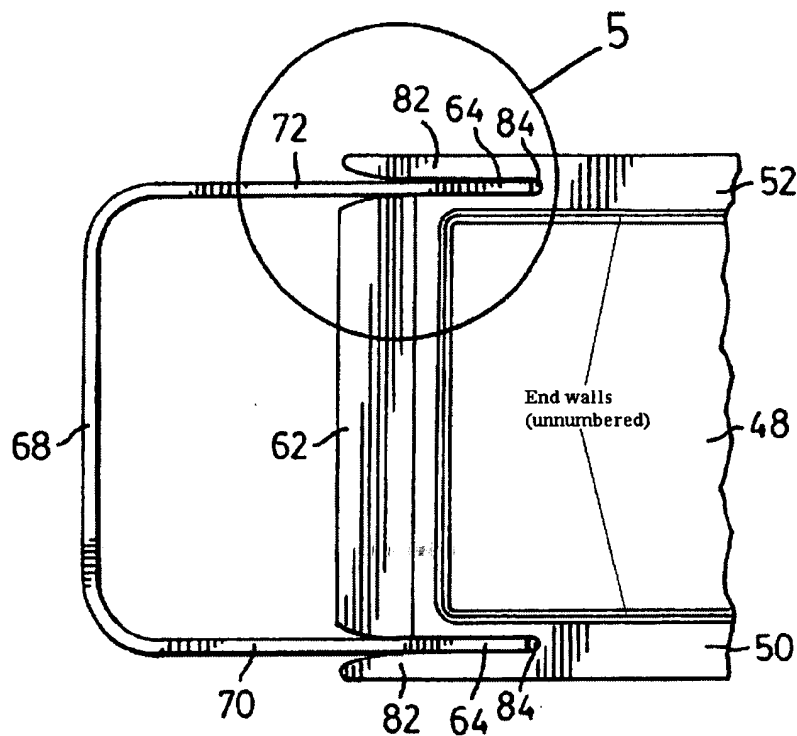


Figure 4 of Jamison et al.  
(edited to show end walls)

Therefore, as the flanges (50,52) are not end walls, the Examiner's assertion that Jamison et al. discloses the structure recited in claims 1, 2 and 11 is improper. Claims 1, 2 and 11 recite that collecting tank has walls joined (or the step of joining) in a fluid tight manner **to** the end walls of the tubes to form a fluid tight joint **between** said walls of said collecting tank and said end walls of said tubes. The flanges (50,52) are not end walls and therefore cannot satisfy this limitation.

Referring to the above edited Figure 4 of Jamison et al., the actual end walls (unnumbered) also fail to satisfy this limitation. As can be seen in the above figure, the end walls (unnumbered) are not joined **to** the walls (70,72) of the collecting tank (26) to form a fluid tight joint **between** the end walls and the walls (70,72). As plainly seen in the above figure, the flanges (50,52), or more particularly, the edges of the flanges (50,52) are joined to the walls (70,72) of the collecting tank (26). Therefore, for this reason alone, the rejection of claims 1, 2 and 11 should be withdrawn.

B. The rejection of claims 1, 2 and 11 as anticipated by Jamison et al. is also improper because Jamison et al. fails to disclose the limitation that the radiator includes a plurality of **generally rectangularly shaped tubes**.

More specifically, in the response dated October 29, 2003 applicants argued that Jamison et al. employs metal stampings having a drawn cup construction that are not generally rectangular shaped because the side flanges (50,52) extend outwardly from the sides (unnumbered) of the recesses (48). In response to this argument, the August 8, 2003 Final Office Action states that Jamison et al. "has a generally rectangular shape" and that the "flanges (50,52) constitute a longer side of the tube." However, this argument does



not have merit as the overall shape of the drawn cup and flange construction of Jamison et al. is more accurately described as saucer shaped and not generally rectangular shaped because the flanges (50,52) extend substantially outwardly from the plate pairs (20).

As plainly shown in Figure 3 of Jamison et al., the flanges (50,52) cannot possibly constitute a "longer side of the tube" as alleged by the Final Office Action. The flanges (50,52) are not located along a plane corresponding to any of the sides of the plate pairs (20). In fact, the flanges (50,52) are located in the middle of the plate pairs (20) and extend perpendicularly therefrom causing the overall cross-sectional shape to be more accurately characterized as saucer shaped. To be considered a "longer side of the tube" as alleged by the Final Office Action, the flanges would have to actually be located along one of the alleged sides of the plate pairs (20) and not in the middle of the plate pairs (20).

Additionally, the flanges (50,52) constitute an additional major dimension that disrupts the shape of the plate pairs (20) because the flanges (50,52) extend substantially outwardly from the middle of the plate pairs (20). Referring again to Figure 3 of Jamison et al., the flanges (50,52) extend outwardly from the central portion (48) a sufficient distance to provide a slot 84 for the collection tank (68). Therefore, the extension of the flanges away from the central portion (48) is significant and is a considerable factor in the shape of the plate pairs (20). Additionally, the flanges (50,52) have a substantial thickness, due to the structural requirement of the flanges (50,52), that when combined into a plate pair (20), adds a further additional dimension that also influences the overall shape of the plate pairs (20). The overall effect created by the flanges (50,52) by extending

substantially from the central portion (48) is to give the plate pair (20) a saucer shape and NOT a generally rectangular shape as recited in the claims.

Furthermore, the side flanges (50,52) cannot be ignored in considering the shape of the plate pairs (20) in Jamison et al. because they are essential to the basic operation of the structure disclosed in Jamison et al. Specifically, the flanges (50,52) are required to seal the plate pairs (20) to the collection tank (68). The sides (70,72) of the collection tank (68) are inserted into slots (84) in the flanges (50,52) and therefore, both the slots (84) and the flanges (50,52) are required by the structure disclosed in Jamison et al.

For this additional reason alone, the rejection of claims 1, 2 and 11 is improper.


#### CONCLUSION

In view of the foregoing, Applicants respectfully request withdrawal of the rejections of claims 1, 2, and 11 and allowance of the case.

Respectfully submitted,

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## APPENDIX OF CLAIMS

1. A radiator comprising:

a radiator core defining a front and a rear face thereof and including a plurality of generally rectangular shaped tubes interleaved with layers of fins for passage of air through said core; and

a collecting tank attached to said core in a fluid tight manner to provide fluid communication between said tubes and said collecting tank;

said tubes each having a pair of side walls extending through said core and joined by end walls at said front and rear faces of said core;

said tubes each terminating at one end thereof in a formed segment wherein said end walls of each tube are bifurcated for a distance from said one end of the tube, and at least one of said side walls is directed away from the other side wall to be adapted to contact a side wall of an adjacent tube in the core;

said directed side wall being joined in a fluid tight manner to said contacted side wall of said adjacent tube;

said collecting tank having walls thereof extending over said front and rear faces of said core past said bifurcation of said end walls and joined in a fluid tight manner to said end walls of said tubes along and beyond said bifurcation to thereby form a fluid tight joint between said walls of said collecting tank and said end walls of said tubes.

2. The radiator of claim 1 wherein both side walls are directed away from each other to be adapted to contact an adjacent tube.

11. A method for fabricating a header-less radiator comprising:

fabricating a plurality of tubes, each having a generally rectangular cross section comprised of a pair of spaced side walls joined by a pair of end walls;

adapting one end of each of said tubes to provide a formed segment having said end walls bifurcated for a distance from said one end and at least one side wall in said formed segment adapted to contact and seal against a side wall of an adjacent one of said tubes when said tubes are joined together in an interleaved configuration with layers of fin to form a radiator core;

assembling a radiator core in a manner defining a front and a rear face thereof and including said plurality of generally rectangular shaped tubes interleaved with layers of fins for passage of air through said core;

said side walls of said tubes extending through said core with said end walls at said front and rear faces of said core; and with said adapted side walls in said formed segments of said tubes contacting a side wall of an adjacent tube in the core;

joining each said adapted side wall in said formed segments in a fluid tight manner to said contacted side wall of said adjacent tube;

attaching a collecting tank having walls thereof extending over said front and rear faces of said core past said bifurcation of said end walls; and

joining said collecting tank in a fluid tight manner to said end walls of said tubes along and beyond said bifurcation to thereby form a fluid tight joint between said walls of said collecting tank and said end walls of said tubes.